

ABSTRACT

Methods and apparatus to improve the speed and reliability of decoders are presented herein. Namely, *a priori* knowledge of Walsh space information is used to increase the speed at which messages are decoded. In systems where control messages contain transmission parameters of concurrently transmitted packet data, a faster demodulation and decoding of control messages allows a receiver to demodulate the packet data sooner, so that a shorter buffer is needed to store the received packet data. The receiver uses the Walsh space from the previous successfully decoded message to first decode the current message. If the decoding attempt is unsuccessful, the receiver then uses a neighboring Walsh space to decode the current message.